

DYNAMIC LIBRARY SEARCHING

ABSTRACT OF THE DISCLOSURE

Systems and methods for mass spectrometry dynamic library searching are provided for use with mass spectrometer spectra. A composite spectrum is created from multiple spectra. The multiple spectra are collected at varying collision energies from a mass spectrometer. Dynamic searching algorithms are utilized for assigning a degree of importance to ions depending upon the identity of the ions, and for assigning a degree of importance to the ion ratios. A search is performed against a library of composite spectra that includes data for adduct, dimer, and oligomer ions. The systems and methods determine a match quality value that takes into account any or all ions in the spectrum along with the ions' ratios and degrees of importance.